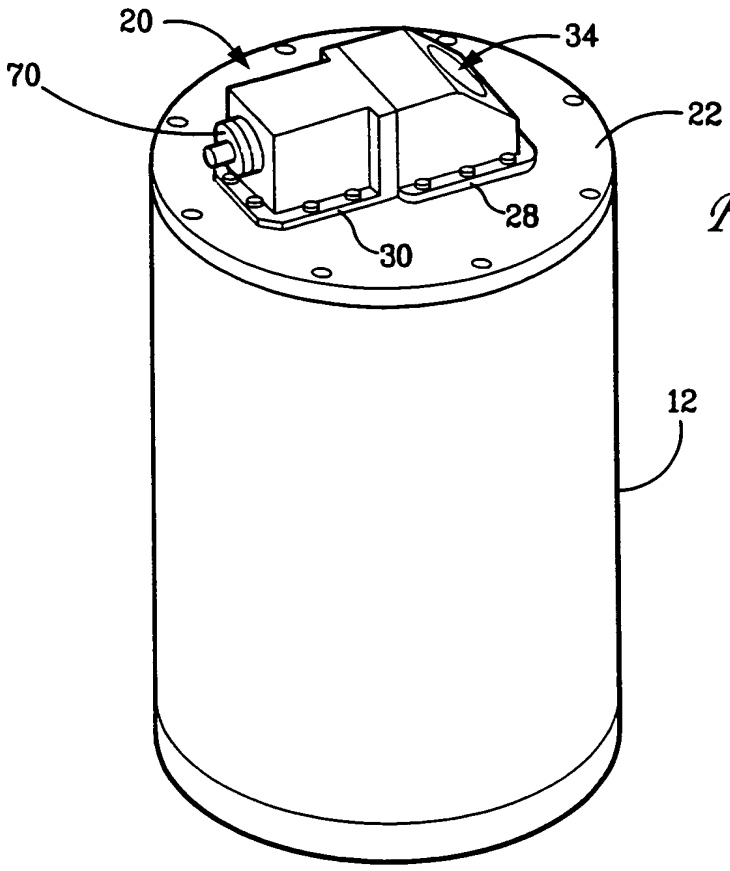


FIG. 1

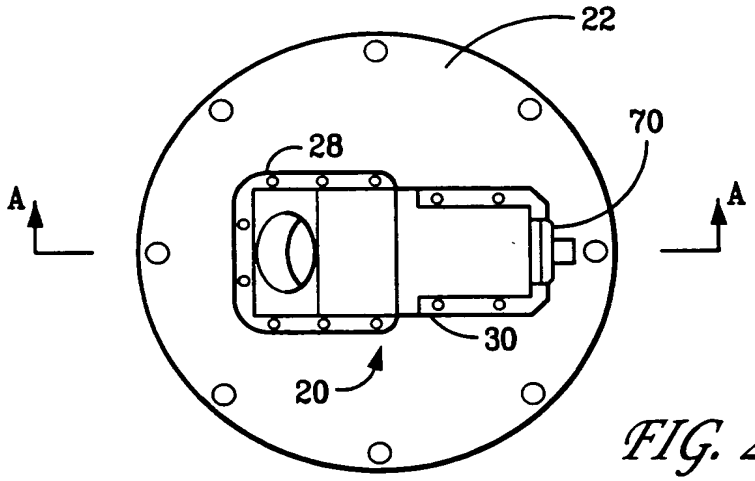


FIG. 2

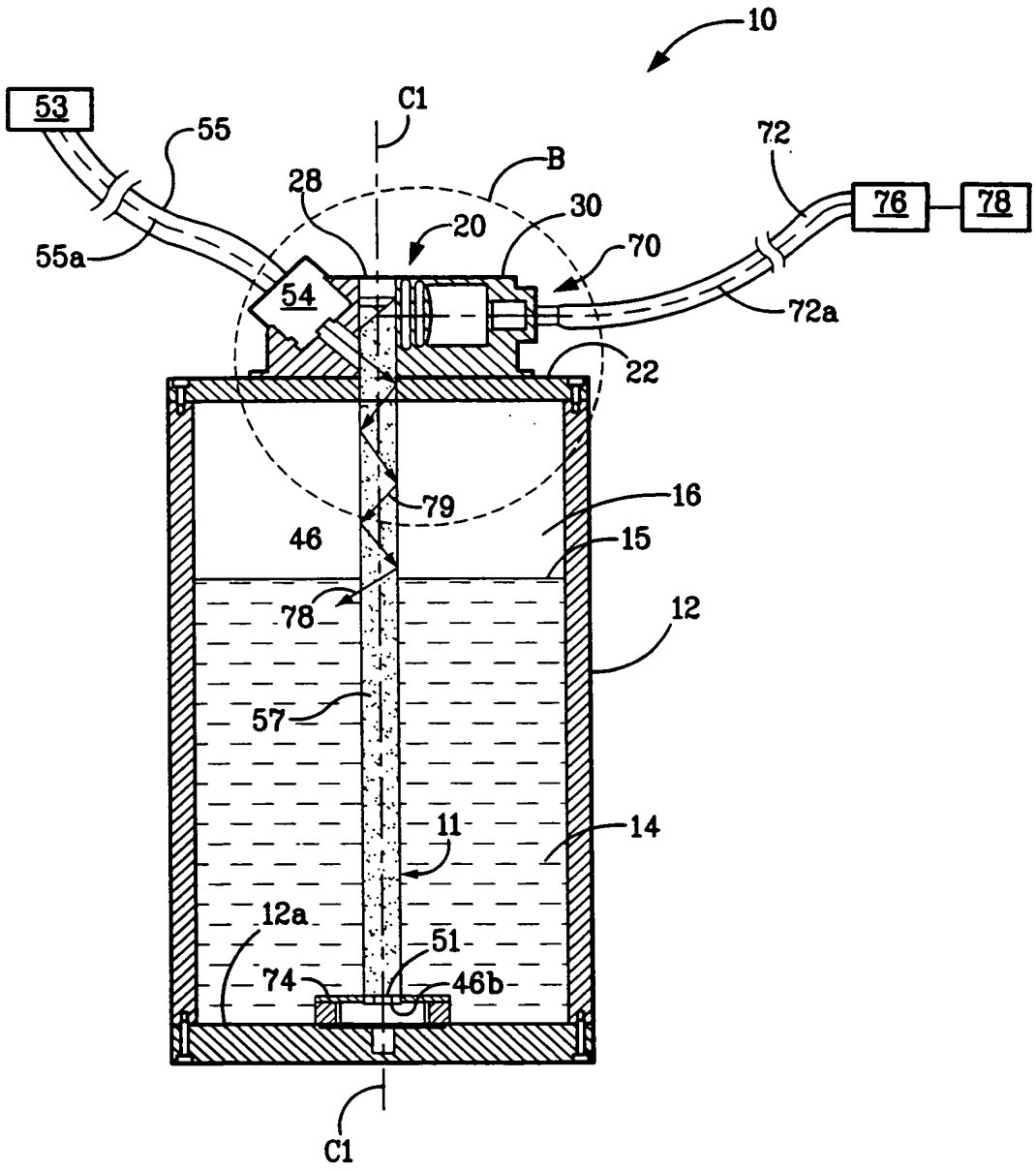
10
53
55
C1
28
B
72
76
78
30
20
70
55a
54
72a
22
79
16
46
15
78
12
57
11
14
12a
51
74
46b
C1

FIG. 3

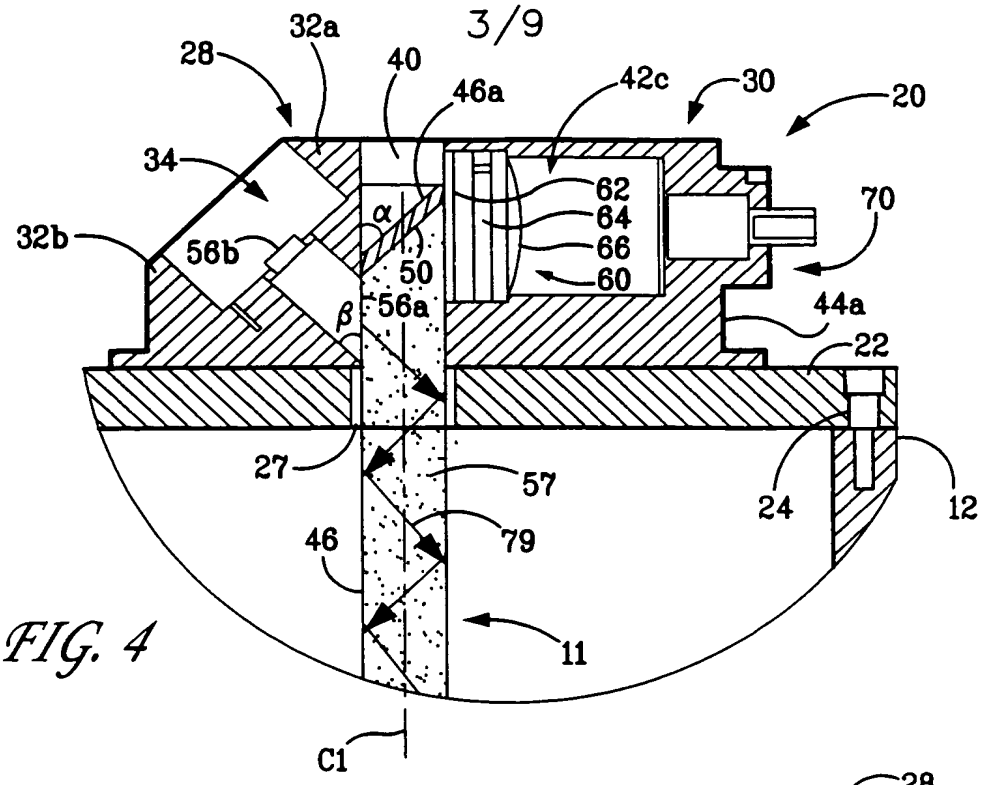


FIG. 4

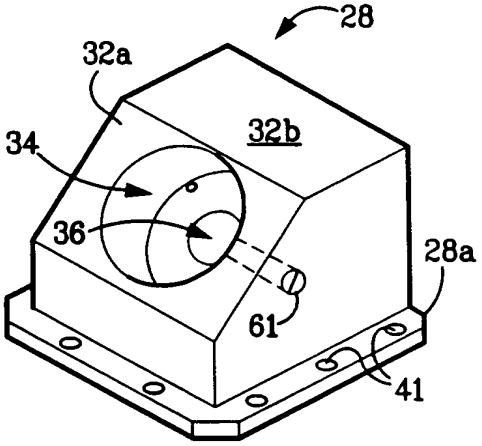


FIG. 5

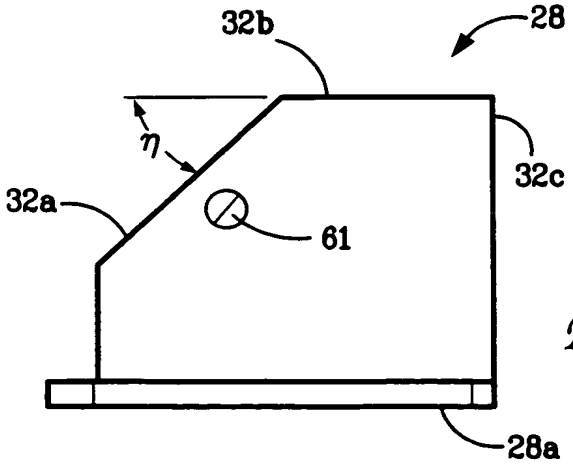


FIG. 6

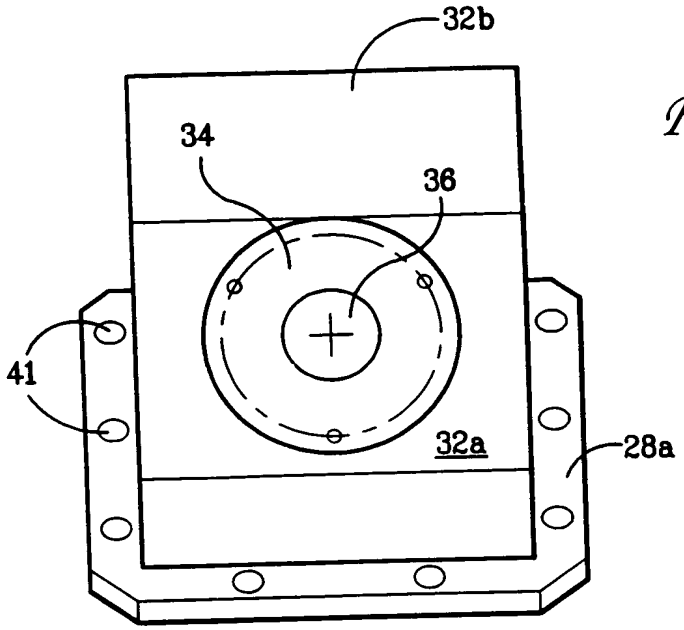


FIG. 7

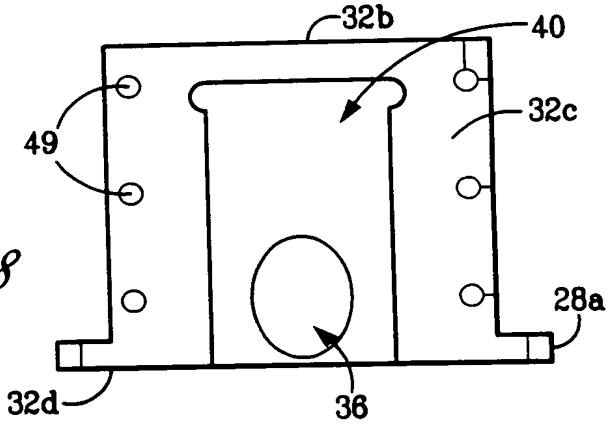


FIG. 8

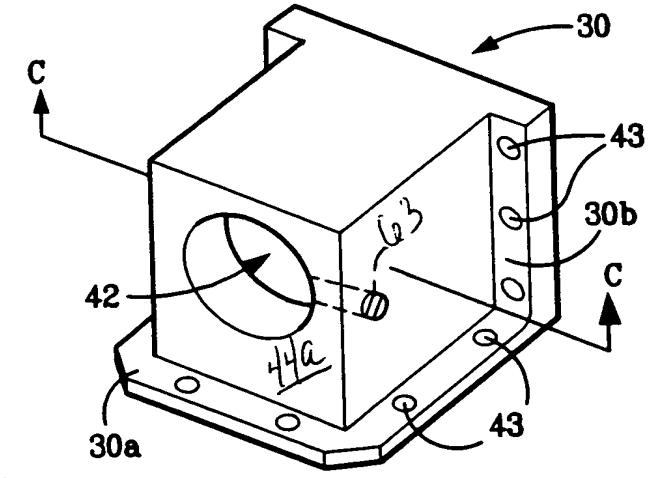


FIG. 9

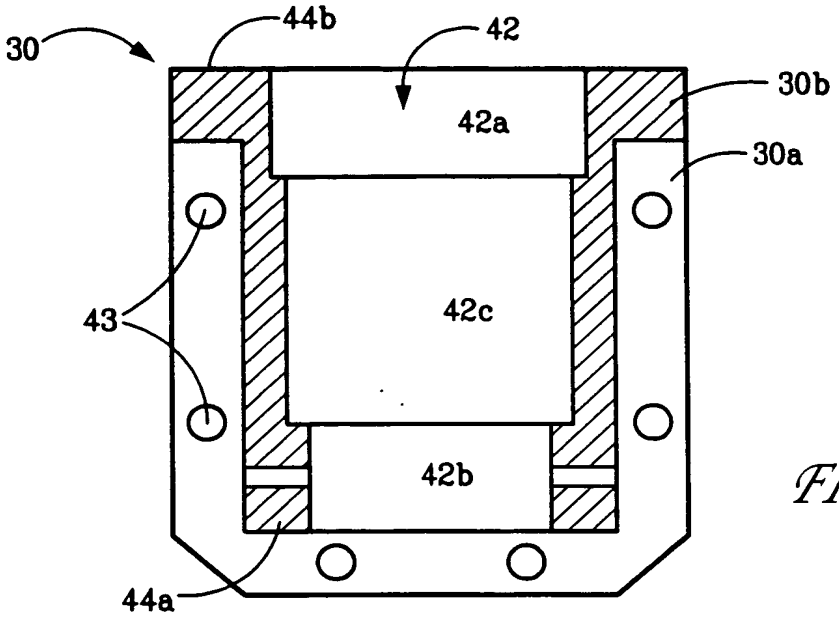


FIG. 10

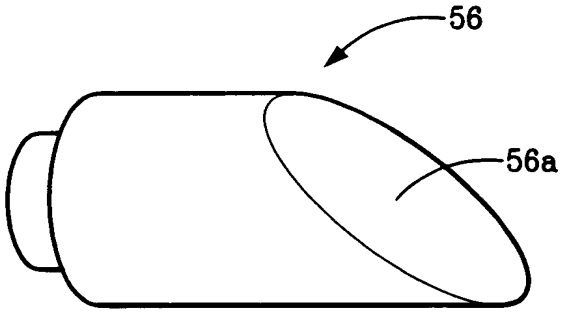


FIG. 11

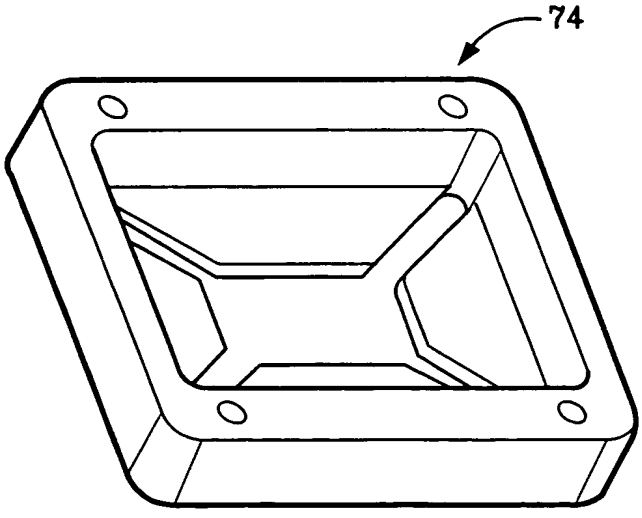


FIG. 12

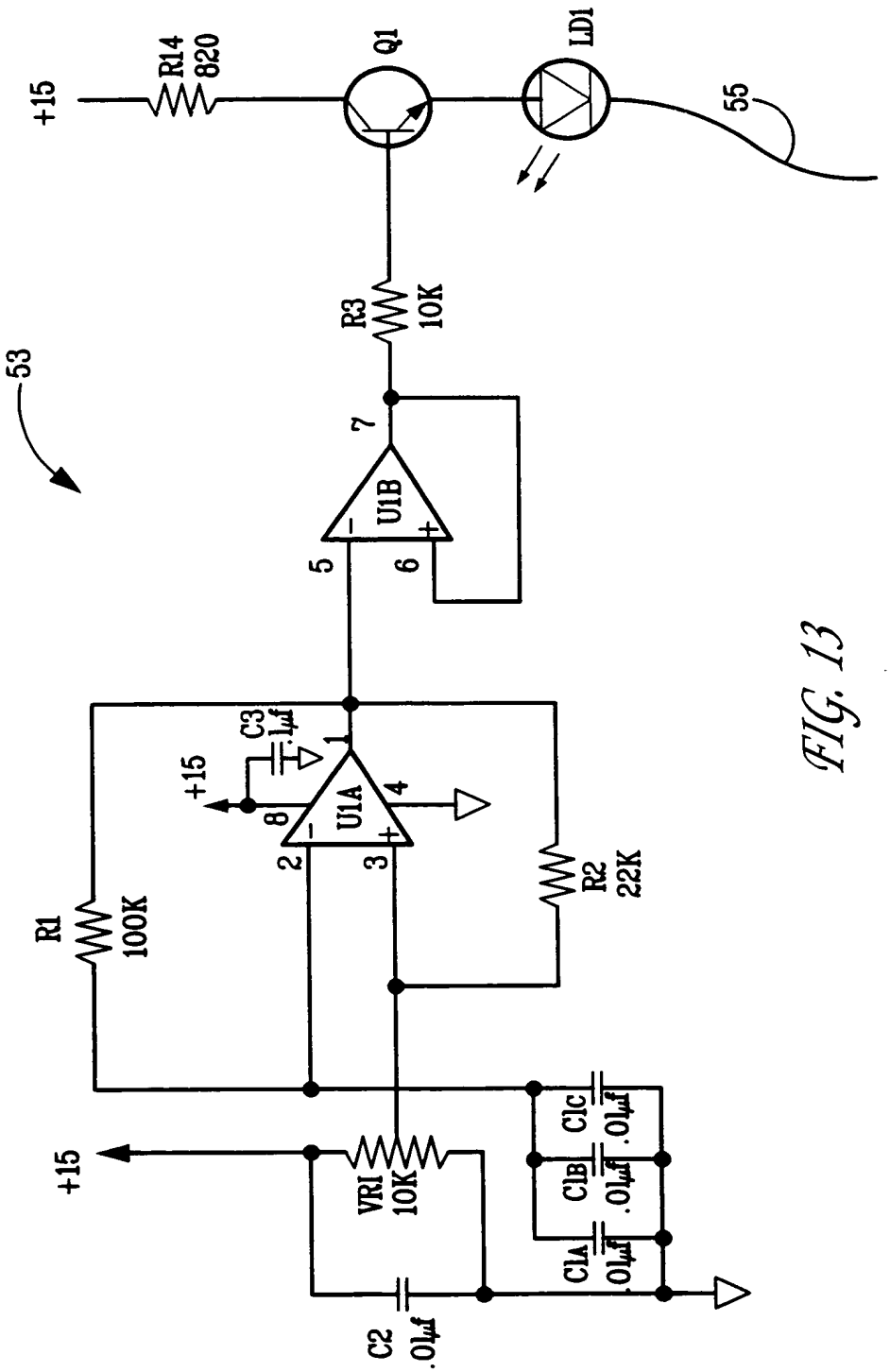
+15
R14
820
Q1
LD1
55
R3
10K
53
7
U1B
5
6
C3
.1μf
+15
1
8
U1A
4
2
3
R1
100K
R2
22K
+15
VR1
10K
C1C
.01μf
C1B
.01μf
C1A
.01μf
C2
.01μf

FIG. 13

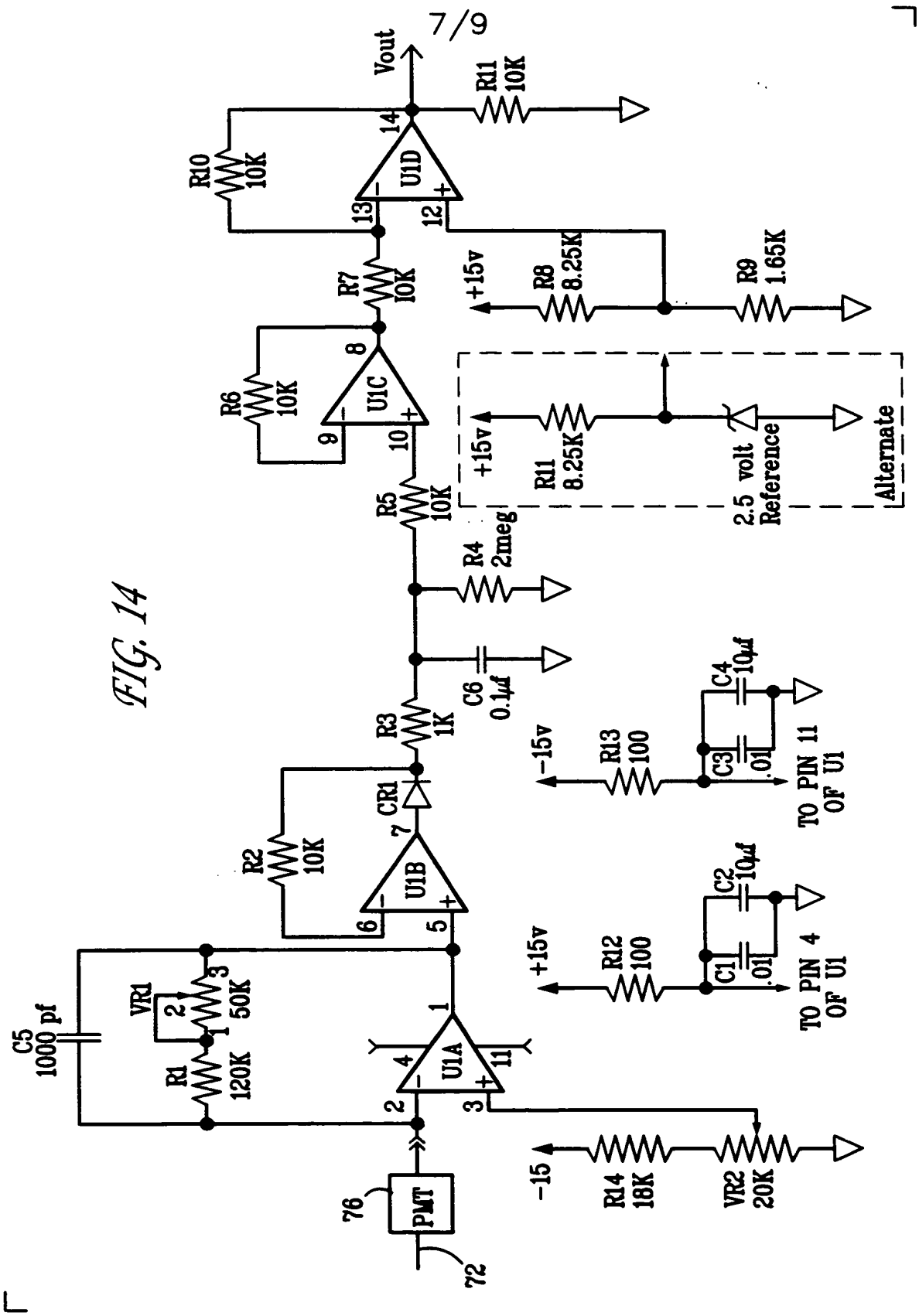
Vout
R11 10K
R10 10K
U1D
14
13
12
R7 10K
+15v
R8 8.25K
R9 1.65K
R6 10K
U1C
8
9
10
+15v
R11 8.25K
2.5 volt Reference
Alternate
R5 10K
R4 2meg
C6 0.1µf
C4 10µf
R3 1K
-15v
R13 100
C3 .01
TO PIN 11 OF U1
CR1
R2 10K
U1B
7
6
5
C2 10µf
+15v
R12 100
C1 .01
TO PIN 4 OF U1
C5 1000 pf
VR1
2
3
50K
1
R1 120K
U1A
1
4
11
2
3
-15
R14 18K
VR2 20K
76
PMT
72

FIG. 14

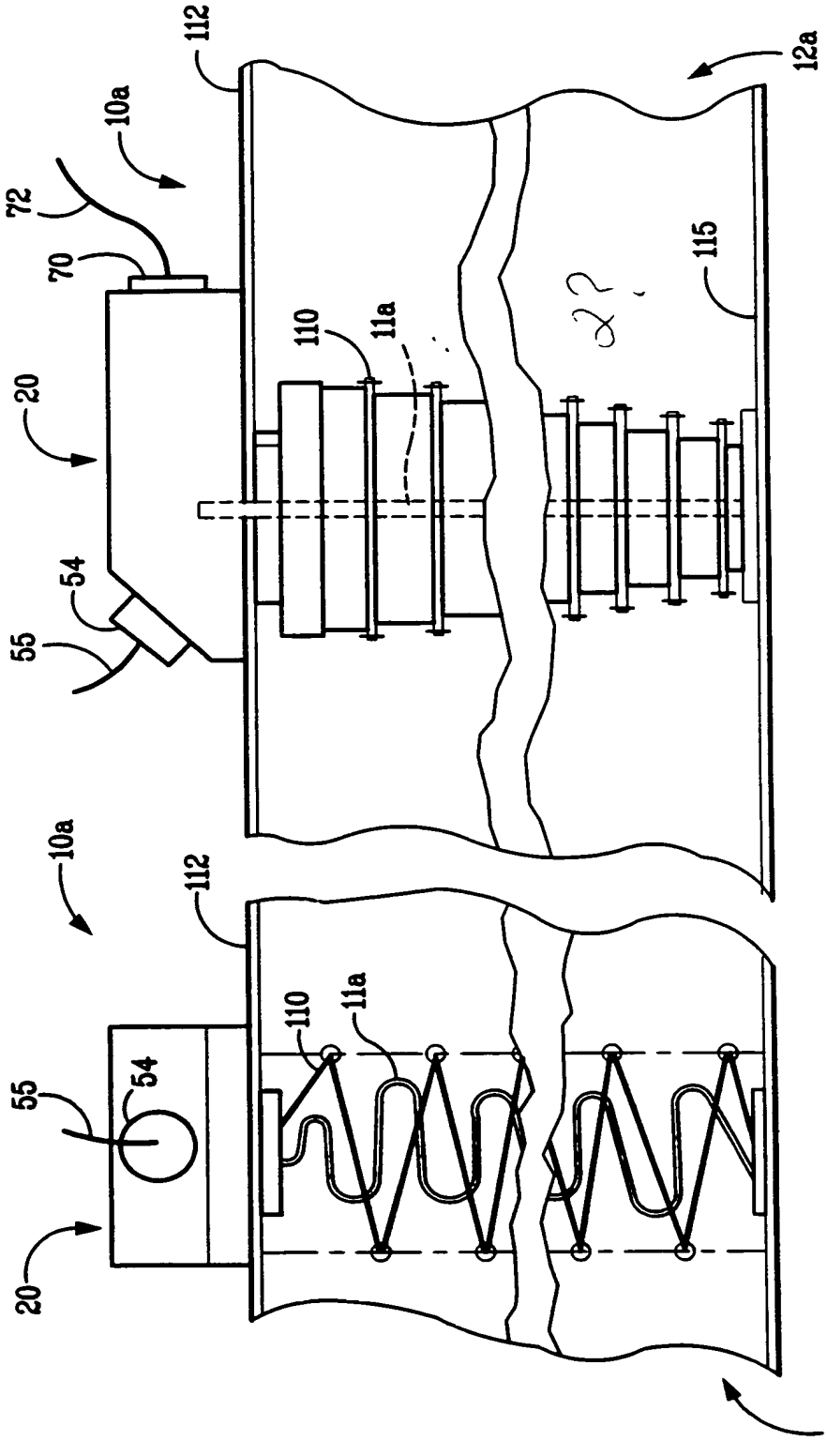


FIG. 15B

FIG. 15A

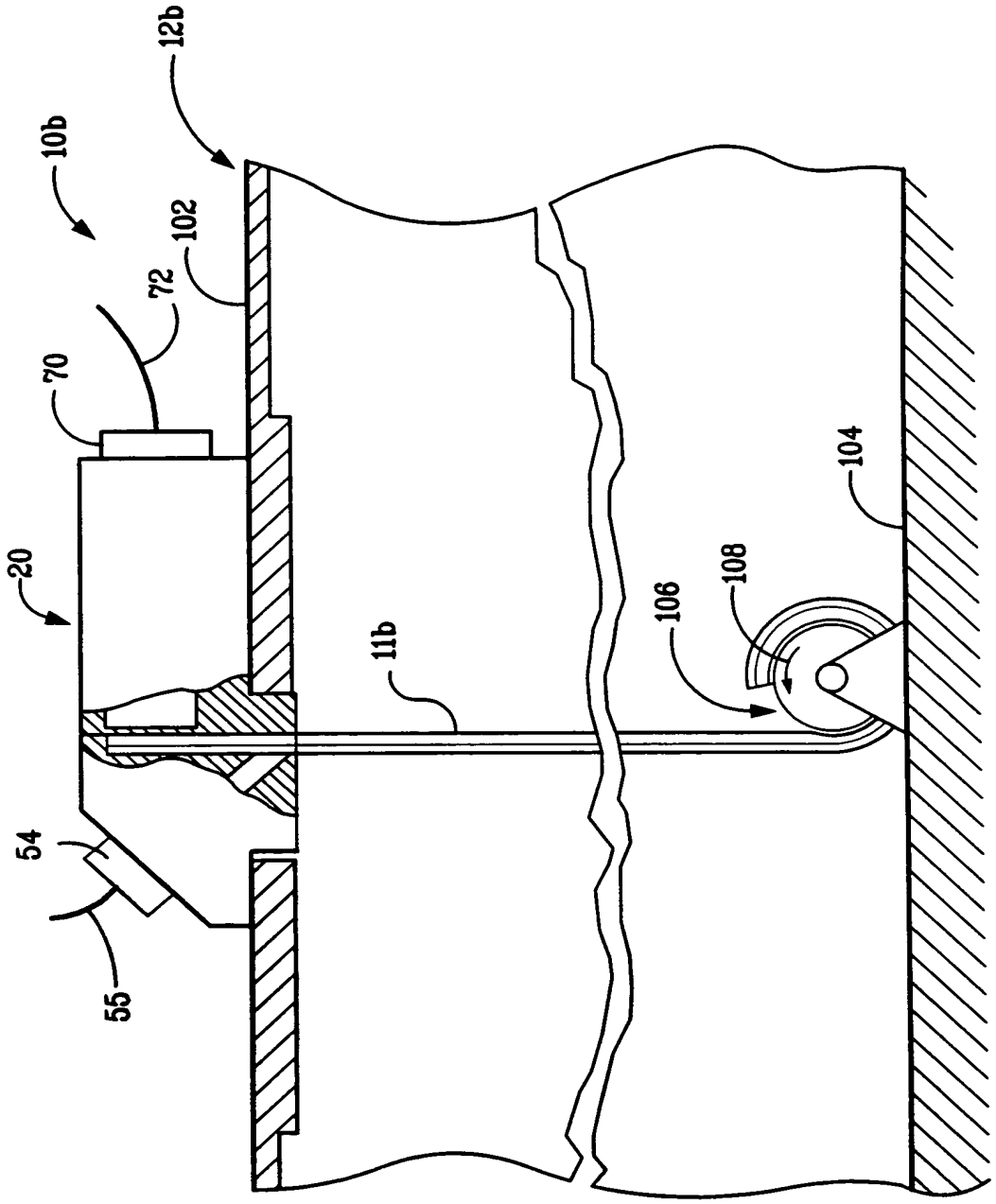


FIG. 16